REMARKS

Receipt of the Office Action mailed July 21, 2005 is acknowledged. No claims have been amended. Claims 19-22 are pending in the application. Applicants note with appreciation that the Examiner has withdrawn the rejection based on Greenfield in view of DeVaughn.

35 USC Section 102(b) Rejection

Claims 20-22 stand rejected under 35 U.S.C. section 102(b) as being anticipated by Byrd (U.S. Patent No. 1,547,562). Reconsideration and withdrawal of the rejection are respectfully requested.

Byrd describes a pipette having a large diameter chamber 9 and a small diameter chamber 7 connected by a narrowed passage way 8. Initially, applicants point out that Byrd is describing a pipette *per se*. In contrast, the claimed invention is directed to a combination aspirating probe and probe tip, where the probe tip is adapted to fit onto the end of the aspirating probe. Assuming, *arguendo*, that the pipette of Byrd could be considered a "probe tip," it is clear that Byrd's pipette would be incapable of fitting onto the end of an aspirating probe.

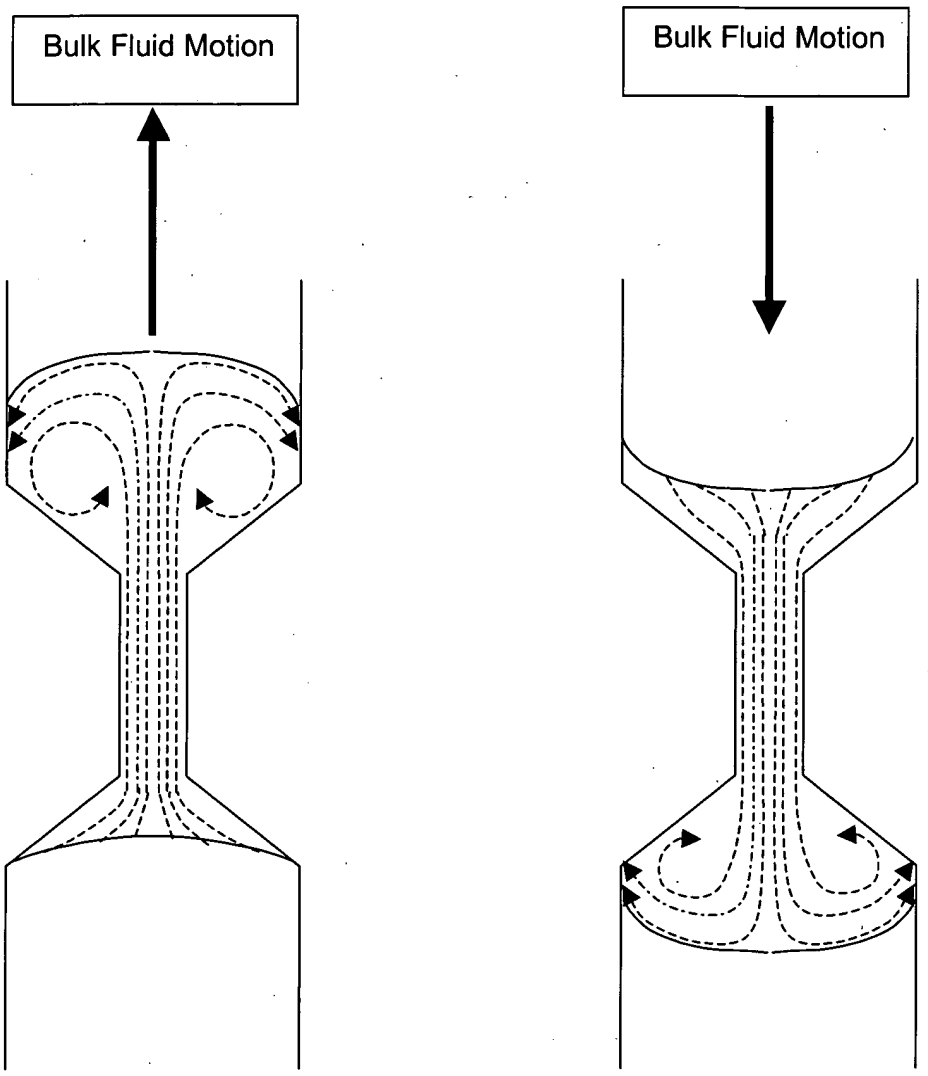
Moreover, Byrd's mechanism of mixing is completely different and much less effective than the mixing accomplished by the claimed probe tip having diameters sufficiently unequal between the middle compartment and the end compartments to cause rotational mixing of liquids as they move past the transition zone wall formed between adjacent compartments. In Byrd, blood is aspirated in a relatively uncontrolled fashion (mouth pipetting) up to graduation line 12 as shown in Figure 1. Next, the pipette tip is immersed in a diluent such as distilled water and aspirated (by mouth) to graduation line 13. *See, e.g.*, Figure 1 and page 2, lines 16-20. At this point, most, but not all of, the blood has been transferred to chamber 9 from

chamber 7. Chambers 9 and 7 now also contain the diluent. It is intuitive that there is no guarantee that the ratio of blood to diluent is the same in chambers 9 and 7. In fact, one would expect to see a much higher ratio of blood to diluent in chamber 9 versus that in chamber 7 in view of the fact that the diluent is the last fluid aspirated into the pipette. Byrd further describes an elastic band 14 stretched over the pipette in such a manner that the two open ends of the pipette are closed off. See Figure 3. The pipette is then grasped between the thumb and forefinger and shaken so that cube 11 provides mechanical mixing by moving through the diluent and blood contained in chamber 9. *See* Figure 2 and page 2, lines 20-27. In view of the fact that there is no free fluid surface in chamber 7, mixing will be quite ineffective (i.e., there is no space for the fluid to "slosh about" in chamber 7 as it is shaken). The final step in the process consists of expelling the contents of the pipette into a test tube for analysis. Although the contents of chamber 9 may have been well mixed, chamber 7 contents would not well mixed and did not even contain the same ratio of blood to diluent that chamber 9 did. Therefore, one would not expect the fluid expelled into the test tube to be homogenous (i.e., poor mixing performance would be expected).

The claimed invention accomplishes mixing by a very different mechanism. A preferred embodiment set forth in the figure below shows several paths of fluid "particle" motion that is present as a meniscus moves through a tube having a narrowed area. The claimed tip design induces a tendency of fluid to "swirl" as it transitions from small to large diameter transitions between the compartments. The fluid "particles" then follow a different path as the bulk fluid motion is reversed which provides for fluid mixing. The claimed diameter geometry is required to achieve this effect. All claimed compartments are an important part of the mixing process. In contrast, it is only the largest chamber 9 that is important to mixing in Byrd.

If the mixing provided by the claimed probe tip where attempted in the pipette of Byrd, cube 11 would sink to the bottom of chamber 9 and partially occlude the transition into area 8. Therefore, in addition to not having the correct geometry to provide mixing between areas, the cube 11 would interfere with mixing. As noted

above, the mixing in Byrd occurs solely in chamber 9, not between compartments having different diameters as claimed. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.



Fluid Particle Motion Showing Paths of Motion Associated with the Claimed Invention

35 USC Section 103 Rejection

Claim 19 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Byrd. Reconsideration and withdrawal of the rejection are respectfully requested. Applicants submit that Byrd fails to teach or suggest the claimed invention for the reason set forth above. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The examination of these claims and passage to allowance are respectfully requested. An early Notice of Allowance is therefore earnestly solicited. Applicants invite the Examiner to contact the undersigned at (732) 524-1496 to clarify any unresolved issues raised by this response.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 10-0750/CDS0255/TJB. This sheet is submitted in triplicate.

Respectfully submitted,

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